



P.B.5818 - Patentlaan 2
2280 HV Rijswijk (ZH)
☎ +31 70 340 2040
TX 31651 epo.nl
FAX +31 70 340 3016

Europäisches
Patentamt

Zweigstelle
in Den Haag
Recherchen-
abteilung

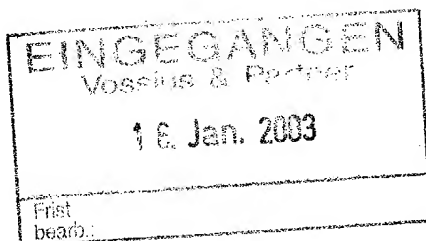
European
Patent Office

Branch at
The Hague
Search
division

Office européen
des brevets

Département à
La Haye
Division de la
recherche

VOSSIUS & PARTNER
Siebertstrasse 4
81675 München
ALLEMAGNE



Datum/Date

13. 01. 03

Zeichen/Ref./Réf.

F 3086 EP

Anmeldung Nr./Application No./Demande n°/Patent Nr./Patent No./Brevet n°.
00929908.2 - -

Anmelder/Applicant/Demandeur/Patentinhaber/Proprietor/Titulaire
SHIONOGI & CO., LTD.

COMMUNICATION

The European Patent Office herewith transmits

- ☐ the European search report
- ☐ the declaration under Rule 45 EPC
- ☐ the partial European search report under Rule 45 EPC
- ☒ the supplementary European search report concerning the international application under Article 157(2) EPC relating to the above-mentioned European patent application. Copies of the documents cited in the search report are enclosed.

The following specifications given by the applicant have been approved by the Search Division :

- ☐ Abstract ☐ Title ☐ Figure
- ☐ The abstract was modified by the Search Division and the definitive text is attached to this communication.
- ☐ The following figure will be published with the abstract, since the Search Division considers that it better characterises the invention than the one indicated by the applicant.

Figure:

- ☒ Additional copy(copies) of the documents cited in the European search report.

(a1)

S. Polenzani



REFUND OF THE SEARCH FEE

If applicable under Article 10 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.

EPO Form 1507 02.93

EPO Form 1507 02.93				



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	GILMAN ET AL.: "Super-Aromatic Properties of Furan. II. The Friedel-Crafts Reaction" J. AM. CHEM. SOC., vol. 55, 1933, pages 4197-4200, XP001079748 cf, experimental part and also reaction schemes on p. 4197	1-6, 40-49	C07D307/46 C07D307/68 C07D307/58 C07D249/10 C07D405/04 C07D405/06 A61K31/4196 A61P31/18 A61K31/41 C07D307/12 C07D407/06
Y	HERAS ET AL.: "Synthesis and cytostatic and trichomonacide activities of 1-glucosyl-nitro-1,2,4-triazoles" EUR. J. MED. CHEM. CHIM. THER., vol. 19, no. 1, 1984, pages 89-92, XP001119423 left column, synthesis of 5 * page 92 *	7-19	
X	DEMISHETTI ET AL.: "The Preparation of 2'-Deoxy-2'-fluoro-1',2'-seconucleosides as Potential Antiviral Agents" J. MED. CHEM., vol. 33, 1990, pages 681-686, XP001118349 Cpd. 15, scheme III * page 683 *	20,21	TECHNICAL FIELDS SEARCHED (Int.Cl.7) A61K C07D
X	DEMISHETTI ET AL.: "A Practical Synthesis of Ethyl 1,2,4-Triazole-3-Carboxylate and its use in the Formation of Chiral 1',2'-seco-Nucleosides of Ribavirin '1'" J. HETEROCYCL. CHEM., vol. 25, no. 2, 1988, pages 651-654, XP001117969 * page 651 * synthesis of 6a * page 652 *	20,21	
Y		7-19	
-/--			
The supplementary search report has been based on the last set of claims valid and available at the start of the search.			
Place of search MUNICH		Date of completion of the search 12 December 2002	Examiner Fritz, M
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

4

EPO FORM 1503 03.92 (P04C04)



European Patent
Office

**SUPPLEMENTARY
EUROPEAN SEARCH REPORT**

Application Number
EP 00 92 9908

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
P, A	WO 99 50245 A (SHIONOGI & CO ;FUJISHITA TOSHIO (JP); YOSHINAGA TOMOKAZU (JP)) 7 October 1999 (1999-10-07) * the whole document *	20-39, 50,51	
A	GB 2 306 476 A (MERCK & CO INC) 7 May 1997 (1997-05-07) * the whole document *	20-39, 50,51	
A	US 5 759 842 A (DOMBROWSKI ANNE W ET AL) 2 June 1998 (1998-06-02) * the whole document *	20-39, 50,51	
A	GB 2 271 566 A (MERCK & CO INC) 20 April 1994 (1994-04-20) * the whole document *	20-39, 50,51	
A	WO 98 34932 A (TERAN ANA M ;PELAEZ FERNANDO (ES); LINGHAM RUSSELL B (US); SILVERM) 13 August 1998 (1998-08-13) * the whole document *	20-39, 50,51	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
The supplementary search report has been based on the last set of claims valid and available at the start of the search.			
Place of search MUNICH		Date of completion of the search 12 December 2002	Examiner Fritz, M
<div>CATEGORY OF CITED DOCUMENTS</div> <div>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</div> <div>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</div>			

4

EPO FORM 1503 03.92 (P04C04)



CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1-6, 40-49

Process for the preparation of (III-1)

2. Claims: 7-19

Process for the preparation of compounds (IV-2), (IV-3),
(IV-4), (IV-6), (IV-8)

3. Claims: 20-39, 50-51

Compounds (VI-7), crystal isomers of (VI-1), (VI-4), their
intermediates (IV-9), processes for the preparation thereof,
pharmaceutical compositions of (VI-1) and use of (VI-1)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 92 9908

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

12-12-2002

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9950245	A	07-10-1999	AU 752005 B2	05-09-2002
			AU 2958199 A	18-10-1999
			BR 9909146 A	05-12-2000
			CA 2326166 A1	07-10-1999
			CN 1294580 T	09-05-2001
			EP 1069111 A1	17-01-2001
			HU 0103460 A2	28-01-2002
			WO 9950245 A1	07-10-1999
			NO 20004787 A	27-11-2000
			NZ 506435 A	28-08-2002
			PL 343249 A1	30-07-2001
			US 6333323 B1	25-12-2001
			US 2002019434 A1	14-02-2002
GB 2306476	A	07-05-1997	NONE	
US 5759842	A	02-06-1998	NONE	
GB 2271566	A	20-04-1994	NONE	
WO 9834932	A	13-08-1998	AU 6271098 A	26-08-1998
			EP 1023281 A1	02-08-2000
			WO 9834932 A1	13-08-1998